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ABSTRACT

This paper presents and discusses longitudinal data collected through surveys completed by students (n=1,545) in the 9th and 11th grades to determine what factors influence a student's change in plans for postsecondary education. Twenty-one Indiana high schools were selected to ensure that the sample proportionally represented students from all ethnic groups, income levels, and rural and urban area schools. Discriminant analysis was used to identify variables which were the most powerful in discriminating among three groups (students whose educational expectation went up, students whose educational expectation went down, and students with no change in educational expectations). The study revealed that aspirations may carry more weight in the 9th grade, whereas realities influence the 11th graders. Several variables were revealed as influencing educational expectations in a positive way: parent's change in educational expectations; the importance of status attainment; the amount of time spent thinking about plans after high school; a change in grade point average; mothers' and fathers' level of education; and the importance parents place on a day job. Contains 24 references. (GLR)

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Factors Influencing High School Students' Differences in Plans for Post Secondary Education: A Longitudinal Study

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This research was conducted under the auspices of and in cooperation with the Indiana College Placement and Assessment Center (ICPAC). ICPAC is a comprehensive state-funded service that, under the direction of the Indiana Commission for Higher Education, encourages postsecondary participation, educational attainment, and career development. ICPAC developed the initial surveys and database management system that made this research possible.

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ABSTRACT

Longitudinal data from surveys sent to students in the 9th- and 11th-grades were analyzed to determine what factors influence a student's change in plans for postsecondary education. A new change variable was created based on a student's after high school plans (or expectations) in the 9th- and 11th-grades. Discriminant analysis showed several variables that influence a student's change in educational expectations: parent's change in educational expectations, the importance of status attainment, the amount of time spent thinking about plans after high school, change in GPA, and the importance parent's place on a day job.

INTRODUCTION

This year (1991) in America, approximately 2.5 million new students will enroll as college freshman in, what is for many, one of life's most consequential rites of passage. For some, choosing a college is a painstaking process. For others, it is almost accidental. For another group, it is never a consideration (Change, 1986). The "complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a decision to attend a specific college, university, or institution of advanced vocational training" is known as "student college choice" (Hossler, Braxton, & Coopersmith, 1989, p. 234).

Several reviews of the college choice literature point to the multifaceted nature of this decision-making process (Hanson & Litten, 1982; Hossler, et al., 1989; Solomon & Taubman, 1973). Typically, the models of college choice reflect a three-stage process that begins with the student's decision or aspiration to pursue postsecondary education (Chapman, 1984; Hossler & Gallagher, 1987; Jackson, 1982; Litten, 1982). In the second stage, the

student gathers information pertaining to postsecondary opportunities and accumulates a set of institutions for consideration. In the final stage, the student selects a college to attend. Hossler and Gallagher (1987) label these three stages as *predisposition*, *search*, and *choice*, respectively.

Few studies of college choice have systematically examined the earlier stages of the college choice process, the period when the thoughts and decision-making processes are occurring. Ekstrom (1985) provided evidence that as many as 61% of the students have made a decision about postsecondary education by the 9th-grade. Schmit (1991) theorizes that interventions may have the most impact on individual students in the earlier stages of the process. In order to understand the early decision-to-attend, or the decision-to-opt-out-of further education, researchers must examine the earlier phases of the college choice process. Curriculum decisions made by students in the eighth and ninth grades may shape their lives. If federal, state, and institutional policy makers seek to influence access and student success rates, more research on the earlier stages of the college choice process is needed to guide their efforts.

PREDISPOSITION AND SEARCH STAGES

The predisposition stage is the first phase of the developmental process of college choice advanced by Hossler & Gallagher (1987). During this stage, a student decides whether or not to attend a postsecondary institution. Several factors have shown a positive relationship toward a predisposition to

postsecondary education: both parental encouragement and parental expectations (Sewell & Shah, 1968; Stage & Hossler, 1989; Conklin & Dailey, 1987), student's academic achievement (Stage & Hossler, 1989; Carpenter & Fleishman, 1987; Manski & Wise, 1983), and status attainment (Sewell & Shah, 1968; Sewell, Haller, & Portes, 1969; Sewell & Hauser, 1975).

Hossler et al. (1989) define the search stage as "searching for the attributes and values which characterize postsecondary educational alternatives as well as learning about and identifying the right attributes to consider" (p.34). A student enters the *search* stage upon aspiring to postsecondary education. The term 'aspiration' appears to be the key to movement from the earlier predisposition phase to the search phase (Jackson 1982; Hossler & Gallagher, 1987; Chapman, 1984; Schmit, 1991). Aspiration is described as an activity that comes from the depths of personal experience and expresses an individual's hopes about the future (Tyson, 1984; Chapman, 1981). A student who is thinking about education after high school is said to have aspirations for postsecondary education.

What is important to note at this point is the nature of these aspirations. Aspirations are not necessarily rooted in reality. Many students aspire for careers that require more academic ability and discipline than the students possess; other students may aspire to attend postsecondary institutions beyond their financial means; some students may include postsecondary institutions in their choice set that do not have the academic program (major) needed to

reach their career goal. It may be that in the search stage of the student college choice process there is a blend of *aspirations* and *reality* into educational *expectations* (Schmit, 1991). Students in the search stage begin to test their aspirations and abilities against an array of postsecondary options.

PURPOSE

The purpose of this study is to identify factors that are influencing a student's decision-to-attend or decision-to-opt-out-of further education in the search stage of the college choice process. Discriminant analysis was used on a longitudinal data set (based on surveys administered to 9th- and 11th-graders) to examine variables which may influence a student's change in educational expectations (CEE). The transition within this stage needs to be studied in order to determine how a student blends their aspirations and realities into an educational expectation. For example, if a 9th-grade student aspires to attend a 4-year college and in the 11th-grade the student expects to attend a vocational school, what influenced this change? Have the realities of entering a 4-year college affected the student's aspirations or have the student's aspirations merely changed? If intervention techniques are to be successful it would be important to know what factors are influencing a student's CEE.

In the present study, a change variable was created that reflects the change in a student's educational expectation from the 9th-grade to the 11th-grade. Students could fall into one of the following categories: their educational expectation went up (a

positive CEE), their educational expectation went down (a negative CEE), or there was no change.

Discriminant analysis was used to describe the major differences between the groups (positive, negative, or no change in expectations). Most research on educational expectations is not longitudinal. However, this study reexamines the same variables used in the previous studies but explores their relationship with a longitudinal data set using the change variable.

METHOD

Sample

The present study involves a data set collected by the Indiana College Placement and Assessment Center (ICPAC). This information was originally gathered as an effort to increase the statewide postsecondary participation rates. Twenty-one high schools around the state of Indiana were selected to insure that the sample proportionally represented students from all ethnic groups, income levels (high, middle, and low), and rural and urban area schools. Surveys were mailed to students and their parents in the 9th- and the 11th-grades in 1987 and 1989. The total number of 9th-graders surveyed represented 80% of the 9th-graders in 1987 in the state of Indiana; the response rate was 24%. The response rate of the 11th-grade survey was 18%. The 9th-grade data set was compared to the 11th-grade data set to identify students who responded to both surveys; the number of students who responded to both the educational expectation items was 1,545.

The total sample was studied by Hossler and Stage (1988) to

determine its generalizability. Students who did not respond in the 9th-grade were surveyed by telephone. Those results indicated that the non-respondents were not planning to pursue education after high school. Therefore, the sample of respondents in this study may be targeting students who **are** going to college.

The data analyzed in this study are a sub-sample of those students who answered both the 9th- and 11th-grade surveys who had no missing data for all of the variables used in the study (n=741). This sub-sample represents 5.2% of the total who responded to the survey in the 9th-grade, and 7.1% of the total who responded in the 11th-grade. This sub-sample mirrors the 9th- and 11th-grade data sets except for the following items. The 9th-graders were more likely to select a higher educational level in the sub-sample; 88.1% said a 4-year college degree or higher in the sub-sample compared to 85.7% in the larger sample. The sub-sample had fewer African American students (2.4%) compared to the larger sample (6.7%). However, the Hossler & Stage (1988) study found that African American students were slightly over represented in the larger sample. The 9th-grade GPA shows more students in the A+ to A- range (25.1%) in the sub-sample compared to the larger sample (20.0%); however, in the 11th-grade the samples are much closer (22.5% and 22.2%, respectively). For both the 9th- and the 11th-grades, mothers were the parent most likely to fill out the surveys.

Defining the Group

Group membership in this study is the student's CEE from the

9th-grade to the 11th-grade. The student's CEE was created based on the question "What is the highest level of education that you expect to achieve?", which was asked on the 9th- and 11th-grade surveys.

Students were then grouped into one of the following three categories: no change (n=303), negative change (n=259) and positive change (n=179). Table 1 summarizes students' CEE. The diagonal on this table represents no change in educational expectations from the 9th-grade to the 11th-grade while the numbers to the right of the diagonal represent students who had a positive change and to the left of the diagonal students with a negative change.

Table 1: Educational Expectations in 9th- and 11th-Grades

	11th-Grade				
9th-Grade	High School Diploma	Vocational/ Technical	Four Year College	Graduate or Professional	Total
High School Diploma	3	2	5	5	15 2.0%
Vocational/ Technical	0	11	36	26	73 9.9%
Four Year College	1	34	125	105	265 35.8%
Graduate or Professional	*	43	174	164	388 52.4%
Total	11 1.5%	90 12.1%	340 45.9%	300 40.5%	741 100.0%

Because of the large number of discriminating variables available on the surveys, a preliminary analysis was conducted. This analysis revealed that students' CEE significantly correlated with 10 variables. These variables were included in the discriminant analysis (see table 2).

TABLE 2: Items used in this analysis (n=741)

Questions asked on both 9th- and 11th-grade surveys; the difference between the 11th grade response and the 9th grade response represents the change variables used in this analysis:

1) What are your grades (average for all classes) for the present school year?

9th	11th	
186	167	Between A+ to A-
365	398	Between B+ to B-
177	166	Between C+ to C-
13	9	Between D+ to D-
0	1	Below D-

2) *What is the highest level of education that you expect your child to achieve?

9th	11th	
19	16	High School Education
77	89	Vocational/Technical Certificate
**	**	Two-year College Degree (Associate Degree)
360	357	Four-year College Degree (Baccalaureate Degree)
285	279	Graduate Degree/ Professional Degree (Doctor, Lawyer, Engineer, etc.)
**	**	Undecided

Questions asked on the 9th-grade survey only:

1) Occupation Mother ***

	Business Owner/Manager or
210	Professional/ Technical Worker
	Clerical/ Sales Worker or
201	Skilled Worker
	Factory Worker/ Laborer or
73	Farmer
	Homemaker or
257	Other

2) Highest Level of Education Completed (Mother and Father)

Mother	Father	
5	3	Grade School
4	10	Eighth Grade
48	37	Some High School
309	260	High School Diploma
201	175	Some College
110	119	Graduated from College
55	81	Post-graduate Degree
9	56	Missing

3) How much do you think about your plans after high school?

349	A great deal
353	A moderate amount
37	Very little
2	Not at all

Questions asked on the 11th-grade survey only:

1) *It is important for me to have a high status job (doctor, lawyer, etc.)

2) *It is important for me to have an 8-5 job that would not require me to take work home

Status			8-5 Job	
Student	Parent		Student	Parent
192	106	strongly agree	71	59
236	220	agree	155	199
155	178	undecided	242	242
135	193	disagree	217	204
23	44	strongly disagree	56	37

*Same question asked on both parent and student surveys.
**Undecided responses were not used in this analysis and 2-yr and vocational categories were combined.
***These were reclassified into skill of job categories.

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ANALYSIS

Given the exploratory nature of this study, a forward stepwise discriminant analysis procedure was used to identify variables which were the most powerful in discriminating among three groups (positive, negative and no change in educational expectations). The Wilks lambda was used as the selection criterion. A Wilks lambda takes into consideration the differences between groups and the cohesiveness, the degree to which cases cluster near their group centroid, within groups (Klecka, 1987).

Two separate discriminant analyses were performed. The first analysis utilized the 10 variables which were identified in the preliminary correlational analysis (n=679). Using the Wilks lambda as the selection criteria, 8 of these variables showed some discriminating power based on a partial F value of 1 or greater (the default for SPSS) at each step. Because SPSS excludes cases that have at least one missing discriminating variable, the procedure was run a second time using only the 8 variables selected in the first run. By only using the variables which added discriminating power the n was increased to 741. The results which follow are based on an n of 741.

After the first step, the Wilks lambda shows the parents' CEE as the best predictor of group membership (Wilks lambda of .55206 $F(2, 738)$ 299.40 $p<.001$). The significant F values between pairs of groups after step one show that group membership can be predicted by parents' CEE alone. However, four more variables added discriminating power based on the Wilks lambda criteria. A

partial F ($p<.05$) statistic was set to test the significance of the increment at each step.

These five variables accounted for 51% of the variance in predicting group membership (Wilks Lambda of .49515 F (10, 1,468) 61.82 $p<.001$). The five variables listed in the order of entry are:

1) the parents' CEE (accounting for 45% of the variance)
2) the amount of importance to the student in having a high status job
3) the amount of time the student thought about plans after high school
4) the change in GPA from 9th-grade to 11th-grade
5) the amount of importance parents place on having a day job

The Functions

The number of possible discriminant functions is the number of groups minus one (Stevens, 1986); therefore in the present study there can only be 2 functions. Pugh & Hu (1991) recommend the use of structure coefficients for interpreting the results of descriptive questions. Since structure coefficients are simple bivariate correlations, they are not affected by relationships with other variables (Klecka, 1987). Thus, all the coefficients reported in this paper are structure coefficients.

The first canonical discriminant function is significant at the .001 level accounting for 96% of the explained variance. The parents' CEE has a structure coefficient of 0.92. If a student's CEE was positive or negative, the parent's CEE followed in the same

direction. The change in students' GPA from the 9th- to the 11th-grade shows a structure coefficient of 0.44. Because of the strong relationship between parents' CEE and change in GPA (correlation coefficient .45 $p < .01$), both the amount of importance job status has for the student and the amount of time the student spent thinking about plans after high school were both more powerful predictors of group membership than the change in GPA. However, change in GPA has a stronger relationship to a student's CEE. For example, if a student's GPA goes up from the 9th- to the 11th-grade the parent's educational expectation goes up. Therefore, much of the variance in parents' expectations can be accounted for by GPA. This relationship is important to note for future research; if parents' educational expectations are not available GPA may be the next best predictor. The parent's response to the importance of a high status job and the student's response to the same question has a correlation coefficient of .57 which is significant at the .01 level (note structure matrix on table 3).

TABLE 3: STRUCTURE MATRIX: Pooled within-groups correlations between discriminating variables and canonical discriminant functions (variables ordered by size of correlation within function)

Variables:	Function 1	Function 2
Parents Change in Educational Expectation	0.92325*	0.11124
Change in GPA	0.44043*	0.18829
Parent -Importance of High Status Job	-0.32809*	0.32299
Importance of a High Status Job	-0.36345	0.76170*
Amount of Time Thinking About After High School	0.19845	0.49558*
Parent-Importance of Day Job	0.11853	-0.27728*
Student-Importance of Day Job	0.03530	-0.05720*
Skill of Mother's Job	-0.03026	-0.03479*

The second canonical discriminant function accounts for only 4% of the explained variance. The sample size is partially responsible for a significant ($p<.001$) function which accounts for only 4% of the explained variance. Therefore, it is not reasonable to try to interpret the 2nd function.

Hossler, Schmit, Vesper & Bouse (1992) suggest that in the earlier stages of the search phase students may be more affected by internal influences while 11th- and 12th-grade students are more responsive to external influences. In this study, external influences (parent's CEE) dominate the student's CEE. The internal dimension (importance of a high status job and time thinking about plans after high school) accounts for only 4% of the explained variance. This suggests that external influences have a larger affect on the students' CEE.

DISCUSSION

In this section each of the 10 variables and their relationship to the students' CEE were examined. Some of the variables have significant relationships with each other as well. The variables are listed in order according to the strength of their relationship with the students' CEE, not in the order of their discriminating power according to the stepwise procedure.

Parent's Educational Expectation

The best predictor of students' CEE, parents' CEE, mirrors the student's change. For example, if a student's expectation changes from a professional degree (9th-grade) to a 4-year degree (11th-grade) the parents will also have a negative change in expectations. This relationship is significantly stronger than any of the other discriminating variables.

Up until this point, the parents' expectations have been examined as a change variable (a change from the 9th-grade to the 11th-grade). However, there are unique relationships between
1) the parent's 9th-grade expectation with a student's CEE and
2) the parent's 11th-grade expectation with a student's CEE.
The parents' educational expectations in the 11th-grade has a stronger relationship with the students' CEE than the parents' expectations in the 9th-grade. In fact, the parents' expectations in the 9th-grade shows a strong negative correlation to the students' CEE. This means the parent of a 9th-grader who expects their child to attain a professional degree is very likely to have their child have a negative CEE. Furthermore, the parents' CEE has

a significant positive correlation to the students' 11th-grade GPA and a significant negative correlation with the students' 9th-grade GPA. This means that 9th-graders with an A average are not likely to have the parent's CEE go up, but, rather, the parent's CEE is likely to go down or stay the same. These correlations may represent the parent reconciling their aspirations for their child (the 9th-grade parental expectation) with the realities of the child's abilities (as measured by GPA) into a parental educational expectation.

In part, this relationship may also be an artifact of this sample; i.e., the parents' expectations may have a ceiling effect (a professional degree is the highest category). The parent of an A student may expect their child to become a lawyer in the 9th-grade and by the 11th-grade the expectation may stay the same, or, the parent may begin to think about the more immediate future when answering the 11th grade survey, i.e., their child needing to attain a 4-year degree.

Change in GPA

Of the students who had a positive CEE, 55% had a positive change in GPA, 32% had no change in GPA, and 13% had a negative change in GPA. Of the students who had a negative CEE, 47% had a negative change in GPA, 39% had no change in GPA, and 14% had a positive change in GPA. The changes in GPA show how strong the relationship is between the realities (in this case, GPA) and the students' CEE.

The students' CEE showed a significant correlation with both

the 9th-grade (-.28) and the 11th-grade (.29) GPAs. Note that while the strength of the relationship was the same, the direction of the relationship was different. As discussed in the parents' CEE section, a 9th-grader with an A average was likely to show no change or a negative CEE. Only 10% of the 9th-grade A students had a positive CEE.

The change in GPA, in the preliminary analysis, had a stronger correlation to students' CEE than the parents' expectations (which is the best predictor of group membership in this model). However, after eliminating the missing data from the analysis, parents' CEE has a stronger relationship to group membership. Therefore, repeating this design on another sample may show that GPA is the best predictor of group membership. It is important to keep in mind that this sample is more representative of students planning to attend a postsecondary institution. GPA may have a larger impact on students who are not planning to attend a postsecondary institution.

The significant correlation between change in GPA and parents' CEE is more evidence for how aspirations and realities are blended into educational expectations. For instance, future research may find the parent's 9th grade expectation and the student's change in GPA can predict the parent's 11th grade expectation. The change in GPA does not appear to add much to predicting group membership because it mirrors the changes in parental expectations (see structure coefficients of .44 compared to .92 for parents' CEE). Two variables - importance of a high status job and time thinking

about plans after high school - added more unique (unique to parents' CEE) information for predicting group membership than GPA.

Student - Importance of a High Status Job

The importance of a high status job was the second best discriminator in the set of discriminating variables. Of the students who had a positive change in expectations, 75% thought a high status job was important, 12% were undecided, and 13% thought a high status job was not important. Of the students who had a negative change in expectations, 36% thought a high status job was important, 35% thought it was not important, and 29% were undecided.

The importance of a high status job reflects the thoughts of the student in the 11th-grade. It should be noted that a student may have adjusted their 11th-grade educational expectation to match their expectation for a high status job. Given its strong relationship to change in expectations, future 9th-grade surveys may want to include this question to determine how strong the relationship is between a high status job and the 9th-grade educational expectation. Given the internal (or aspirational) potential of this question, asking the question on the 11th-grade survey may be more representative of the external (or realities) nature of the question. Therefore, this question may measure an aspiration in the 9th-grade and an expectation in the 11th-grade.

Parent - High Status Job

Of the students who had a negative CEE, 42% had parents who thought a high status job was not important, compared to 32% who

thought status was important. Of the students who had a positive CEE, 55% thought a high status job was important and 24% thought a high status job was not important. The correlation between parents' and students' responses to the high status question is .57 ($p<.01$), therefore, it is not surprising that the parents' responses did not add any unique information after the students' responses had already met the criteria for entrance.

Student - Think About Plans After High School

In general, all of the students thought about their plans after high school at least a moderate amount. However, of the students who had a positive CEE, 31% stated that they thought about their plans a great deal compared to 50% of the no change group and 54% of the negative change group.

This item was included on the 9th-grade survey which is the time when a student may be more affected by internal influences. This may represent a point in a student's search phase where realities and aspirations are being refined into a realistic expectation. Further research in needed which examines the extent to which a student is evaluating their individual potential (realities), or about careers in which they might be interested (aspirations). What types of plans are affecting this negative CEE?

Mothers' and Fathers' Level of Education

For both the mother and the father, the highest level of education achieved did have a significant correlation with the students' change in expectations. However, parents' education did

not contribute much to predicting group membership. This was probably due to the significant correlation between parents' education and parents' expectations in the 9th-grade. Interestingly, parents' education and the parents' expectation in the 11th-grade does not show a significant correlation. This may suggest that 11th-grade expectations are based on realities instead of aspirations.

Type Of Job For Mother

Most of the mothers in this sample were clerical workers, homemakers or professionals. Even though the mother's job did not meet the criteria for entrance, an examination of the cross tabulations does suggest some interesting trends. As the mothers job requires more skill it is likely that the student will not have a positive CEE. Of the students who show a positive CEE, only 17% have mothers in highly skilled positions, compared to 42% for homemakers and others, and 41% for mothers in jobs requiring some skill. Of the students who show a negative CEE, 31% have mothers as homemakers and others, 36% have mothers as clerical or general workers, and 33% have mothers as professional/technical or business owners. These relationships show 1) mothers from the clerical and skilled worker fields show students with a negative to no change and 2) few mothers from the professional fields show students with positive changes.

Parent - Importance Of A Day Job

Students who had a negative CEE had parents who placed more value on having an 8-5 job. Of those who had a negative CEE, 44%

agreed that a day job was important, compared to 28% who were undecided and 27% who thought a day job was not important. Students who had a positive CEE, had parents who thought a day job was not important (37%), compared to undecided (32%), and a day job was important (31%). This may suggest that parents favor working over education.

There is a significant correlation between the importance parents place on a day job and the importance students place on a day job. This may explain why the students' responses were excluded from the discriminating set of variables.

Summary

In general, students who were most likely to have a positive change in educational expectations (CEE) were: 1) students who had parents that had a positive CEE, 2) students who were interested in having a high status job, 3) ninth grade students who spent a moderate amount of time thinking about plans after high school (however, not as much time as students who had no change or a negative CEE), 4) students who show an increase in their GPA, and 5) students whose parents thought a day job was not important.

Students who were most likely to show a negative CEE were: 1) students who had parents that had a negative change in their educational expectations, 2) students who stated that a high status job was not that important, 3) students who spent the most time thinking about plans after high school, 4) students who show a decline in their GPA, and 5) students whose parents place more importance on a day job.

Finally, students that show no change in their educational expectations from the 9th- to 11th-grades were students who: 1) had parents that had not changed their educational expectations, 2) GPA's that have not changed, and 3) gave plans after high school some thought.

Conclusion

It is apparent that intervention techniques that are aimed at increasing postsecondary educational aspirations should target parents as well as students. The encouragement and support of a parent may be the most important factor in creating a positive CEE in a student.

The relationship between the students' 9th- and 11th-grade GPA and the students' CEE is one of the major findings of this study. A 9th-grade A student is very likely to have a negative CEE. Educators must not assume that a 9th-grade A student will continue to have high aspirations in the 11th-grade. In this study, 45% of the 9th-grade A students had a negative CEE. This may indicate that other realities or external influences are affecting an A student's 11th-grade expectation. Students with a C or D average are very likely to have a positive CEE. Of the students receiving a C or D in the 9th-grade, 44% had a positive CEE. Students with lower GPA levels need to be reexamined in future studies due to the small size of the C's and D's in this sample. Further research is needed that examines all GPAs; the relationship found in this study may be the result of a regression to the mean effect.

Further research is needed to determine the importance of

aspirations separate from realities. According to this study, it is possible that aspirations may carry more weight in the 9th-grade and realities more weight in the 11th-grade - particularly for the parents expectations (which then affect the students expectations). Intervention techniques in the 9th-grade may want to address some of the realities of postsecondary education while aspirations are high. Students with low aspirations may not be affected by the realities while students with high aspirations may be negatively affected by pending realities. Interventions that target aspirations first and then address the realities may be the most effective for 9th- and 11th-graders.

Further research is needed on samples that more proportionally represent students who are not planning to attend a postsecondary institution. These students may be more influenced by realities, instead of aspirations, in the 9th-grade. Therefore, the changes from the 9th- to the 11th-grade may not be as evenly distributed. For instance, in the present study 741 students were evenly distributed into the positive, negative and no change groups. A 9th-grader not planning to attend a postsecondary institution may be more apt to have the same 11th-grade expectation because he/she may be more rooted in realities at an earlier age.

Future research needs to examine the process within the search stage. If a student is affected by both internal and external influences at different grade levels, educators must understand the differences between an external and internal influence and the factors which make up these influences.

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